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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY-DOCKET NO.	CONFIRMATION NO.
09/472,958	12/27/1999	HO-SEONG LEE	Q57079	9416

7590

12/05/2003

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EXAMINER

SOLOMON, GARY L

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 12/05/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/472,958

Applicant(s)

LEE, HO-SEONG

Examiner

Gary L Solomon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11-03-2003 have been fully considered but they are not persuasive.

In regards to claims 1 through 5, Applicant states Hwang discloses a zoom in apparatus. A "zoom in " apparatus is never stated in the teaching of Hwang (US 5,666,160). Hwang discloses a digital zooming system. It is well known to one of ordinary skill in the art that zooming systems zoom in and out. For instance, if the zoom factor is 4, and it is changed to 2, zooming out has just taken place. Hwang discloses the system in which a zoom magnification factor m is changed in order to change the zoom area, which is to be displayed (Column 4, Lines 12-16).

In regards to claims 1 through 5, Applicant further states that Hwang in view of US 5,412,421 to Hale does not overcome the limitations of claims 2 and 3. Hwang As previously stated, Hwang teaches a digital zooming system in which the magnification factor is changed (Column 4, Lines 12-16). Hale teaches a motion compensated sensor that contains a motion detector that includes a gyroscope and an accelerometer (Column 3, Lines 15-19). Configuring Hale's motion detector, which includes an accelerometer and a gyroscope in Hwang's digital zooming apparatus in order to determine movement of the sensor would have been obvious to one of ordinary skill in the art at the time of the invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ^{- 10} Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hwang (5,666,160).

For claims 1, 4, and 5, refer to previous grounds of rejection.

For claim 1, Hwang discloses a digital zoom apparatus for forming a zoomed out image from a plurality of received image signals in accordance with a given magnification, the apparatus comprising: an image signal storage unit which stores a plurality of frame or field image signals (Abstract); and a record and control unit which zooms out the received frame or field image signals in accordance with a given magnification, receives motion information from said motion information detector, controls the location in said image signal storage where the zoomed out image signals are to be recorded, and records zoomed out image signals in said image signals storage unit, wherein the plurality of received frame or field images are zoomed out and combined to form the zoomed out image (Column 3, Line 29 through Column 4, Line 4), which is synthesized according to a degree of overlap between the received images (Column 3, Line 60 through Column 4, Line 5; Note: The recorded images are overlapped due to the applied motion correction. Column 3, Lines 38-42).

For claim 4, Hwang discloses all the previous limitations, wherein said motion information detector compares a previously received image signal with a currently received image signal to detect said motion information (Column 6, Lines 32-34).

For claim 5, Hwang discloses the storage in the image signal storage unit of only those portions of received images needed to form the zoomed out image, whereby storage

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space is conserved by elimination of redundant information. By using only the portion of images that are within the zoom area, the redundant information in the unselected area of each subsequent input image is eliminated (Column 3, Lines 33-37; Column 6, Lines 65-67).

For claim 6, Hwang discloses all the previous limitations, wherein redundant copies of duplicate portions of received images which overlap are not stored in said image signal unit by said record and control unit (Column 4, Lines 40-56).

When the images are added synthesized together the redundant copies are thus eliminated.

For claim 7, Hwang discloses all the previous limitations, wherein said record and control unit receives a new image signal which includes a duplicate portion overlapping with a previously recorded image signal, the record and control unit maintains the duplicate portion from the previously recorded image signal (Column 3, Lines 37-59).

For claim 8, Hwang discloses all the previous limitations, wherein said record and control unit receives a new image signal which includes a duplicate portion overlapping with a previously recorded image signal, the record and control unit replaces the duplicate portion of the previously received image signal with the duplicate portion of the new image signal (Column 3, Lines 50-67).

For claim 9, Hwang discloses all the previous limitations, wherein said record and control unit receives a new image signal which includes a duplicate portion overlapping with a previously recorded image signal, the record and control unit stores an interpolation of the duplicate portion of the previously recorded image signal and the duplicate portion of the new image signal (Column 3, Lines 50-67).

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For claim 10, Hwang discloses all the previous limitations, wherein non-overlapping portions of received image signal, needed to form zoomed out image, are stored in the said image signal unit by said record and control unit (Column 3, Lines 55-60).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang (US 5,666,160) in view of Hale (US 5,412,421).

For claims 2 and 3, refer to previous grounds of rejection.

For claims 2 and 3, Hwang discloses all the previous limitations. Hwang includes a motion detector, which detects movement. An accelerometer or gyroscope is a motion detector. However, Hwang does not explicitly teach accelerometer or gyroscopic sensor to detect and provide motion information data, even though one of ordinary skill in the art would know that accelerometers and gyroscopes are motion detectors.

Nevertheless, Hale teaches a motion compensated sensor that contains a motion detector that includes a gyroscope and an accelerometer (Column 3, Lines 15-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to configure Hale's motion detector, which includes an accelerometer and

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gyroscope in Hwang's digital zooming apparatus in order to determine movement of the sensor.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L Solomon whose telephone number is (703)-305-4370. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christensen, B Andrew can be reached on (703)-308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


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Or faxed to:

(703) 872-9314, (for informal or draft communications, please label
"Proposed" or "Draft")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA, Sixth Floor (Receptionist).

9. Any inquiry of a general nature or relating to the status of this application should
be directed to the customer service number **(703) 306-0377**.


December 1, 2003


VU LE
PRIMARY EXAMINER